

REMARKS

This application has again been carefully reviewed in light of the office action mailed October 3, 2003, in which the examiner rejected all pending claims. Claims 1-19, 21-34, 37-41, and 44-53 are presently pending and at issue in the application. Of these, claims 1, 21, 37, and 44 are independent.

Claim 1 recites, in part, "a monitoring routine adapted to be executed on the processor that uses the one or more operating parameters and the characteristic curve to estimate the presence of cavitations in the device." Claims 21, 37, and 44 all include similar recitations directed to the use of a characteristic curve to estimate the presence of cavitation. The cited art fails to disclose or suggest such use of characteristic curves to estimate the presence of cavitation.

As was the case with Fisher, Jr. et al., U.S. Patent No. 5,754,446, March '506 discloses the use of a sensors and a submersion factor as an indication of the risk of cavitation. See, for example, column 5, line 56 through column 6, line 2 of March '506. The examiner's reliance on column 12, lines 52 through 65 as teaching the use of characteristic curves to "estimate the presence of vibration or cavitation" is also flawed. By reading the text at column 12, lines 28 through 51, immediately above the passage cited by the examiner, one can readily ascertain that March '506 teaches that cavitation is a "stressor" that may be monitored by sensors.

In addition, March '506 incorporates the disclosure of Fisher, Jr. et al. '446 with regard to the use of constant flow curves. See, column 13, lines 1-11 of March '506. However, the constant flow curves are not used by Fisher, Jr. et al. '446 to estimate the presence of cavitation, but instead are used to identify candidate gate and blade settings. See, column 10, lines 38-43 of Fisher, Jr. et al. '446.

Accordingly, March '506 simply fails to disclose that it is possible and fails to suggest that it is even desirable to use a characteristic curve along with one or more operating parameters in order to estimate the presence of cavitation within a device. Instead, March '506 in fact teaches away from the invention by indicating that relative submersion level should be used to indicate the presence of cavitation.

Because March '506 does not, in any manner, disclose the use of a characteristic curve to estimate the presence of cavitation, as recited in each of the pending claims, March '506 does not and cannot anticipate any of these claims. Still further, it is clear that the prior art

must make a suggestion of or provide an incentive for a claimed combination of elements to establish a *prima facie* case of obviousness. *See, In re Oetiker*, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992); *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. 1985). This principle holds true even if the applied art could be modified to produce the invention recited by the pending claims. *See, In re Mills*, 16 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 1990); *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.")

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). MPEP 2143.

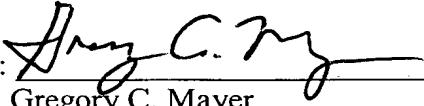
None of the secondary references make up for the deficiencies of March '506. Accordingly, none of the combinations of art relied upon by the examiner render the rejected claims obvious.

The examiner has not identified any suggestion or motivation to modify or combine the cited references, and instead appears to be improperly relying on a hindsight-based analysis.

For the foregoing reasons, reconsideration and withdrawal of the rejections of the claims and allowance thereof is respectfully requested. Should the examiner wish to discuss the foregoing, or any matter of form, in an effort to advance this application towards, allowance, the examiner is urged to telephone the undersigned at the indicated number.

Respectfully submitted,

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